

FACT SHEET FOR NPDES PERMIT NO. WA0042048

NEW DAY FISHERIES, INC.

SUMMARY

The permitting authority has made a tentative decision to issue a new permit, effective through June 30, 2003, to New Day Fisheries, Inc. (Port Townsend) for the discharge of wastewaters and stormwater associated with seafood processing activities, to surface waters of the state. The tentative decision to issue the permit is based on a determination that two necessary conditions are fulfilled: (1) that the minimum treatment/control criteria established by state and federal regulations are achievable with the technologies and management practices in place or proposed and (2) that the discharge under these technology-based controls would not have a reasonable potential to cause or contribute to violations of any receiving water quality standards or the characteristic uses of the receiving water. The draft permit should accompany this fact sheet.

The purpose of this fact sheet is to present the facts and reasoning on the basis of which the tentative decision was made.

PUBLIC INVOLVEMENT OPPORTUNITY

Interested persons are invited to comment on this tentative decision. Comments on the draft permit will be received for 30 days following the day of publication of the notice in the local newspaper, *The Port Townsend Leader*. (The target date for publications is April 14, 1999.)

All written comments submitted during the comment period will be retained by the permitting authority and considered in making the final decision on the application for a permit. The permitting authority will provide copies of the application, the tentative decision, and the fact sheet on request. Persons who submit written comments will be notified of the final decision.

The applicant or anyone affected by or interested in the tentative decision may request a public hearing. The request must be filed within the 30-day comment period, and must indicate the interest of the party filing such a request and the reasons why a hearing is warranted. The permitting authority will hold a public hearing if it determines there is sufficient public interest.

Please mail written comments and/or hearing requests to the permitting authority at the address given in Appendix A.

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 Revised Code of Washington (RCW) which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits [Chapter 173-220 Washington Administrative Code (WAC)], water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see [Appendix A--Public Involvement](#) of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant:	New Day Fisheries, Inc.
Facility Name and Address:	New Day Fisheries, Inc. 2427 Washington Street Port Townsend, WA 98368
Type of Facility:	Seafood Processor
SIC Code:	3304
Discharge Location:	Waterbody name: Port Townsend and Kilisut Harbor Latitude: 48° 06' 00" N Longitude: 122° 45' 00" W.
Water Body ID Number:	WA-17-0020

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

New Day Fisheries, Inc. is an existing seafood processor located on a site leased from the Port of Port Townsend on Port Townsend Bay. Seafood processing has been on-going in the present buildings for at least 40 years. Gilford Packing and Ivar's were the previous operators. The current tenant (New Day) has operated the facilities since 1987. At least one of the former operators had a NPDES permit to discharge to surface waters of the state, but that permit is no longer in effect. The processor has been discharging its wastewater to the municipal sanitary sewer system, but a shift to the processing of seafoods which produce a stronger wastewater, together with sewage treatment plant capacity limitations have led to this application for a permit to discharge directly to surface waters.

INDUSTRIAL PROCESS

Raw materials:

The primary "raw materials" have been predominately locally-caught fish and shellfish. New day processes salmon, tuna and crab, besides shrimp. The applicant estimates the following maximum amounts of raw seafood will be processed in any given day:

Shrimp	16	thousand pounds per day
Tuna	1.5	thousand pounds per day
Salmon	28	thousand pounds per day
Crab	10	thousand pounds per day
Bottom Fish	5	thousand pounds per day

Water (up to 160 gallons per minute) and energy are also used.

Production Processes:

Shrimp processing is highly mechanized. After unloading from the boat into totes which are moved into the building, the shrimp are conveyed by broad belt to the peeler where they are first precooked by steaming for 1.5 minutes, then mechanically beheaded and peeled through a system of counter-rotating rollers. Water is used to transport the meat and shell away from the peelers. The shrimp meat is then flumed to a washing process which vigorously agitates the shrimp to remove remaining shell. After washing, the shrimp meat is flumed to a separation process where meat and shell fragments are removed. From here, the meat is carried to a dewatering belt and then to an air-cleaning step which shakes and blows the shrimp to further dry the shrimp and remove any remaining shell fragments. The meat is then further sized and graded manually.

Crab is received live, cooked with steam, iced and mostly sold whole (sometimes in parts), fresh, and frozen. Some are sold live.

Salmon is received fresh and whole, and is mostly hand-butchered. Filleting, beheading, evisceration, scraping, and washing of the body cavity are typically done manually. Certain sizes can be mechanically eviscerated and beheaded.

Tuna is received frozen whole from the fishing vessels. They are thawed in bins of cold water and then filleted and the meat washed by hand. They are mostly canned (in glass jars).

Bottom fish (halibut and black cod) are received beheaded and gutted. The processing merely consists of rinsing and freezing.

Products:

Products are fresh and frozen shrimp, fresh and frozen salmon fillets, fresh and frozen salmon "in the round" (beheaded and gutted), cooked whole crab, high-quality canned tuna filets.

Byproducts:

The seafood processing residues which are screened out or otherwise not part of the product for human consumption are 100 percent usable for other purposes. Currently, these organic residues which are rich in nutrients are utilized by local organic farms to fertilize and condition soils. There are other uses for these wastes, such as fish food and extraction from shells of organic polymers for a variety of uses. At this time, there is no monetary compensation for these byproducts, but they are worth the cost of collecting at least.

Wastestreams:

The only residues from these seafood processing activities which are not directly usable (and used) by humans are the residues which are soluble or too small for the screening process to capture. These end up in a wastewater stream of up to 150,000 gallons per day of the water used in all the processes and clean-up.

DISCHARGE OUTFALL

The applicant proposes to use a vessel or vessels to receive the effluent from the treatment process and to discharge it from the moving vessel, at least one-half mile offshore, between Point Hudson and Marrowstone Point, in the Strait of Juan de Fuca at the entrance to Puget Sound.

PERMIT STATUS

This is a new, previously unpermitted facility.

An application for a permit was submitted to the Department on February 12, 1999, and accepted by the Department on March 1, 1999.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

During the history of the previous permit, the Permittee has remained in compliance based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters:

Table 1: Wastewater Characterization

Parameter	Concentration
TSS	2270 mg/L
BOD	3060 mg/L
FOG	760 mg/L

SEPA COMPLIANCE

For this project, the Department is the agency responsible for compliance with the State Environmental Policy Act (SEPA) since there is no permit required from the city or county. An environmental checklist has been submitted to the Department. A determination of nonsignificance has been made by the Department and since the project involves no other agency with jurisdiction, the DNS is issued without public notice or comment period.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The design criteria for this treatment facility are as follows:

Table 2: Design Standards for Tangential Screen.

Parameter	Design Quantity
Maximum Flow Rate	200 gpm

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Effluent limits have been established and promulgated by EPA for certain categories of industries. Seafood processing is one such industry, its limitations codified at 40 CFR Part 408. The activities at this site would more particularly fall under Subparts H - Dungeness and Tanner Crab Processing, Subpart K - Northern Shrimp Processing, Subpart N - Tuna Processing, Subpart R - West Coast Hand-Butchered Salmon Processing, Subpart S - West Coast Mechanized Salmon Processing, and Subpart U - Non-Alaskan Conventional Bottom Fish Processing. Categorical effluent limits differ between "existing sources" and "new sources." Because there was a discharge of pollutants from seafood processing activities at this site prior to the promulgation of standards of performance for these activities, in accordance with federal regulatory definitions, this site is deemed an "existing source" for the purposes of establishing categorical effluent limitations.

The effluent limitations given in the permit are the EPA-established effluent guidelines for the activities described in the permit application. They are based on screening technology, which is already installed at the site. It is expected that these limitations can be met. These technology-based effluent limits are deemed to satisfy the state requirement that all known, available and reasonable methods of control of the discharge of pollutants be applied.

The best management practices (BMPs) specified by Special Condition S4 are deemed to meet the "best-professional-judgement" minimum technology-based control requirements for the stormwater discharges. The authority to impose (or not to impose) technology-based limits by "best professional judgement" of the permit writer is provided by section 402(a)(1)(B) of the clean water act and the attending federal regulation 40 CFR 125.3.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Strait of Juan de Fuca which is designated as a Class AA marine receiving water in the vicinity of the outfall. Other nearby point source outfalls include City of Port Townsend POTW outfall. Significant nearby non-point sources of pollutants include urban and agricultural runoff. Characteristic uses include the following:

water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Fecal Coliforms	50 organisms/100 mL maximum geometric mean
Dissolved Oxygen	7.0 mg/L minimum
Temperature	13 degrees Celsius maximum or incremental increases above background
pH	7.0 to 8.5 standard units
Turbidity	less than 5 NTU above background
Toxics	No toxics in toxic amounts (see Appendix C for numeric criteria for toxics of concern for this discharge)

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

The "pollutants" from this discharge are not man-made or exotic, but indigenous life-supporting nutrients, which, were it not for human intervention, would have remained in some form within the system from which they came.

There is no question that the greater environment to which these "pollutants" would be discharged is well prepared to handle them, indeed expects them and depends on them. The only question is whether the unnatural and concentrated way in which they would be returned would be in some way damaging to the immediate environment. It has been determined that the constituents or properties of the discharge which may have a potential to violate applicable receiving water criteria are biochemical oxygen demand (dissolved oxygen criteria), suspended solids (turbidity and narrative aesthetic criteria), oil and grease (turbidity and narrative aesthetic criteria) and ammonia (aquatic life toxicity criteria). The need for water quality based limits for each of these pollutants is considered below.

In assessing the impacts of the proposed manner of discharge of these "pollutants", one must consider that:

- The discharge will be moving and intermittent, spread over space and time;
- The discharge stream will tend to float, being fresh water and less dense;
- The soluble oxygen demand will be in the surface layer, then, where it will tend to be satisfied by direct atmospheric reaeration;
- Deep penetration of the oxygen demand (and other pollutants) will not be a factor unless there is strong mixing (active receiving water), and if there is mixing, the oxygen demand will tend to be dispersed and diluted;
- Some of the oxygen demand will disappear into the digestive systems of macro-organisms (and be dispersed and deferred in that way), reducing the initial biochemical oxygen demand (BOD) which would be exerted by micro-organisms. (This mechanism would not be accounted for in the standard BOD test);

- The rate of oxygen demand based on standard tests is not transferable to this cold, saltwater environment.

That is, our predictive modeling tools would be just too blunt to accurately quantify the impacts of this wastewater discharge on the receiving water in any special and temporal detail. We can, however, get a rough idea of the potential magnitude of the impact using simple deductive reasoning. For example, we can accurately calculate the total oxygen demand and relate that to the volume of water which would be required and available to satisfy it. Since the shrimp processing effluent limitations would allow the greatest mass discharge of all the "pollutants" in question, we will use these limits to make an assessment of the most severe potential impacts of the proposed discharge on the receiving water. (The daily wastewater from the other kinds of seafoods would have a smaller loading and therefore a lesser impact.)

Dissolved Oxygen

Washington's water quality standards allow no more than 0.2 mg/L dissolved oxygen depletion by any unnatural activity. There is no categorical limit for existing sources for allowable oxygen demand discharge, but EPA data collected in developing effluent guidelines indicate 5-day BOD from 100 to 150 pounds per thousand pounds of seafood processed and data supplied by the applicant from sampling of its own shrimp processing wastewater shows a maximum-measured 5-day BOD loading of 52 lb. per 1000 pounds of seafood processed. Using a liberal 150 pounds per thousand pounds and the maximum projected processing of 16 thousand pounds per day:

$$150 \times 16 = 2400 \text{ pounds of 5-day oxygen demand}$$

If we can assume that the tidal currents will dissipate the wastestream widely twice per day, and that the relatively slow-acting BOD will be widely dispersed over the tides and days that it is exerted, the 1/2-day oxygen demand is more relevant in assessing the impact. Given the colder environment, too, which decreases the rate of demand (50 percent per 10 degrees Celsius) it is probably conservative to assume that the 1/2-day demand is no more than 20 percent of the 5-day demand, or 480 pounds. This is the amount of oxygen the wastewater BOD load would demand from the receiving water between tidal flushes, after which it is presumed to be widely dispersed. At a depletion allowance of 0.2 mg/L, the amount of water required to supply this demand would be:

$$480 \text{ lbs} \times 454,000 \text{ mg/lb.} \times 1.0 \text{ liter} / 0.2 \text{ mg} \times 1 \text{ gal} / 3.785 \text{ liter} \times 1 \text{ ft}^3 / 8.33 \text{ gal} = 34,500,000 \text{ ft}^3$$

If we assume a 200-foot wide strip (equivalent to the allowable distance from a discharge point where water quality criteria may be exceeded) and a depth of 60 feet, a length of 2875 feet would incorporate enough water to supply this demand. Theoretically, then, a boat underway could discharge the entire wasteload from the maximum conceivable processing day over a half-mile stretch of water and not violate the very severe criterion of 0.2 mg/L dissolved oxygen depression. In reality, because of capacity constraints, at least 10 boat loads would be required (in this extreme case) and these could each be easily spread over distances of 2.5 miles at the boat cruising speed of about 20 miles per hour and the proposed pumping rate of 500 gallons per minute.

On the basis of these considerations the permitting authority is satisfied that there is no reasonable potential for this proposed discharge of wastewater to cause or contribute to violations of the water quality criteria for dissolved oxygen.

Total Suspended Solids (TSS)

There is no water quality standard for suspended solids but there is a standard for turbidity which can be related to suspended solids. While there is no direct conversion (the relationship is dependent on the material and the particle size), it has been observed for organic suspended solids that one turbidity unit is roughly equivalent to 20 mg/L suspended solids. The turbidity criterion specifies that turbidity may not be increased by more than 5 NTU by any unnatural activity. At the dilution required to meet the dissolved oxygen criterion (120,000 gallons of wastewater in 290,000,000 gallons of receiving water), which we have shown can be easily met by the proposed discharge method, the suspended solids concentration from the discharge would be reduced to approximately 1 mg/L, or roughly 1/20 NTU, if we apply the correlation mentioned above. It is expected that if the turbidity criterion is not violated, that there will also be no visible effect outside the dilution zone, satisfying the narrative aesthetic standard as well.

On the basis of these considerations the permitting authority is satisfied that there is no reasonable potential for this proposed discharge of wastewater to cause or contribute to violations of the water quality criteria for turbidity or visual aesthetic impact. Therefore, no limitations based on these criteria are placed in the permit.

Aesthetic Impacts

There is no direct water quality standard for oil and grease. A narrative standard, however, which may be relevant, is that there shall be no unnatural discharge of pollutants which is offensive to the senses. Since oil and grease is essentially insoluble and lighter than water, it will not mix appreciably and will float. Other particles, too, may tend to float in the wake of the discharge. It is expected, however, that the very small particle size limit and the large area over which the discharge will be spread will combine to preclude any perceptible impact of this discharge. On this basis the permitting authority has determined that there will be no reasonable potential to violate the narrative standard regarding aesthetic impacts. Therefore, no limits based on this standard are placed in the permit.

Ammonia

The most stringent saltwater ammonia water quality criteria are based on aquatic life toxicity. They are roughly 15 mg/L (acute) and 2.2 mg/L (chronic) @ pH = 8, T = 10°C, salinity = 30mg/L. The maximum expected ammonia concentration in this discharge, based on data provided in the EPA effluent guidelines development documents is about 7 mg/L. This is proportionately very low relative to other organic discharges (domestic sewage for example). It is easy to see that the available dilution which has already been demonstrated (2000 to 1 or more) and the biochemical conversion to nitrate will easily dilute and dissipate ammonia beyond any potential to cause chronic toxicity. The acute toxicity level simply could not be reached. On this basis the permitting authority has determined that there is no reasonable potential for this discharge to cause or contribute to violations of the water quality criteria for ammonia.

Whole Effluent Toxicity

Direct testing with live organisms to assess the toxicity of the discharge due to unknown constituents or combined effects is not deemed to be warranted for this discharge of natural, indigenous materials back to the environment from which they came.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the Sediment Management Standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.1. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The Conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-220-210).

SPILL PLAN

The Department has determined that the Permittee may store a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop a solid waste plan to prevent solid waste from causing pollution of waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan designed to prevent solid waste from causing pollution of the waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

DISCHARGE CONDITIONS

These conditions are necessary to assure that the discharge will be carried out in accordance with the assumptions made in the decision to issue the permit.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this proposed permit be issued effective to June 30, 2003, the designated expiration date for East Olympic Basin discharge permits.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(E2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The Department will publish a Public Notice of Draft (PNOD) on April 14, 1999, and April 21, 1999, in *The Port Townsend Leader* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6280, or by writing to the address listed above.

This permit and fact sheet were produced by the Department of Ecology Water Quality Program.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.